



MUSEUM of
NORTHERN
ARIZONA



Coconino County
Sustainable Building
Program Presents:

*The 2015 Sustainable Building
Awards*



Awards for 2015

-
- ❖ Terra BIRDS
 - ❖ White Sage Landing
 - ❖ Moline Residence
 - ❖ Randall Ranch on Roundup Trail
 - ❖ Hempleman Addition
 - ❖ Perry Addition
 - ❖ Housing Solutions of Northern Arizona – East St.
 - ❖ J.E.P. Model Home
 - ❖ Elden Townhomes
 - ❖ The Orion Energy Retrofit
 - ❖ Lewkowicz Residence
 - ❖ Mars Hill House
 - ❖ Habitat for Humanity- Verde St.
 - ❖ Ballard Artist Studio
 - ❖ The Mule Barn
 - ❖ Cooperrider Residence
 - ❖ Sedona Fire Station No. 6
 - ❖ NAIPTA Facility Expansion



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Leading by Example!

Thank you MNA for hosting the
2015 Sustainable Building Award Ceremony!



Award Plaques

Made possible by: AP Sawmill,
Karen Myers, and the
Construction Technology
Management Dept. at Coconino
Community College.



Terra Birds

Award Certification Level: Community Model

- Non-profit team of educators, professional gardeners and youth advocates
- Established in 2013 - educates and empowers youth through gardening
- Provides teachers with design and logistical support for school garden programs.
- Uses landscapes and gardens as living laboratories to study scientific principles and concepts
- Relates these to teacher's classroom goals
- Guides students in becoming responsible land stewards of their school grounds.



Executive Director: John Taylor

Program Director: Bob Chambers

Development Director: Andrea Hartley

Program Director: Brian Moody

White Sage Landing

Award Certification Level: Community Model

Featuring:

- Rainwater collection and storage –40,000 gallons annually
- Passive solar design implemented with south orientation and proper shading
- 90% of waste recycled or reused-including the house-used to be a horse stable-raised and new 1st floor added
- Minimal impact to natural vegetation during construction
- Terraced yard w/rainwater diverted to herb gardens for essential oil business-[www. whitesagelanding.net](http://www.whitesagelanding.net)
- 100% of energy supplied by solar – completely off grid
- Xeriscaping with complete greywater system installed
- 3 solar showers, Energy Star appliances and low flow faucets and shower heads



Owners: Kathryn & Michael Sharp
Solar: Prometheus Solar -Ryan Holtz

Randall Ranch on Roundup Trail

Award Certification Level: Intermediate

Featuring:

- Insulation with R-38 formaldehyde-free batts, R-21 blown-in cellulose, R-49 at ceiling
- Natural day lighting with solar tubes and efficient windows
- Smart design to minimize waste and labor
- Rainwater collection and large storage system, treated for domestic use
- Radiant heating in the floors and under tub
- Energy Star appliances
- Low-flow toilet, appliances, and fixtures
- Energy efficient water heater on recirc system
- Durable, low-maintenance materials utilized



Owners: Steve & Lark Randall

Contactor: JKC Inc.

Interior Designer: Kerry-Lyn Love

Hempleman Addition

Award Certification Level: Home Addition

Featuring:

- Retrofit Addition to existing house
- Windows foamed, taped & moisture sealed
- Formaldehyde-free batt insulation
- Air sealing in all new receptacles and switches
- 8 foot overhang to minimize heat gain on the west
- Entire roof replaced with 30 year shingles
- Converted from propane to natural gas
- Efficient space heating with new stove



Owners: *Steven & Leslie Hempleman*
Builder/Designer: *Ridge Top Construction*

Perry Addition

Award Certification Level: Home Addition

Featuring:

- Addition was built beyond current Energy Code insulation standards with additional air-sealing around framing.
- Efficient windows with a U-factor of .18 were installed in the addition and in key areas of the existing home
- Efficient direct vent gas stove was installed with a programmable thermostat and remote for heating
- To reduce landfill waste, scrap materials were donated to Habitat ReStore
- An additional return was added, to reduce the work of the furnace and increase comfort



Owners: *Carl Perry and Family*
Contractor: *JKC, Inc.*

Housing Solutions of Northern Arizona-East St.

Award Certification Level: Advanced

Featuring:

- Efficient design for smaller house accommodation
- City infill, affordable housing rentals- 4 units total
- Rainwater sensor installed on outdoor irrigation
- Energy Star appliances & LED lighting
- Low VOC & durable materials throughout
- Permeable walkways, driveways & xeriscaping/native landscape
- ADA accessible & components in one unit, others with ADA built-in block



***Owner: Housing Solutions of Northern AZ
Builder: AHC Homes, LLC.
Architect/Designer: PWM Architects***

J.E.P Model Home

Award Certification Level: Advanced Plus

Featuring:

- J.E.P system (patented) for walls and ceiling-provides superior efficiency with an R-64 and no thermal bridging (heat/cold transfer) from durable steel framing
- Energy Star certification
- 12 solar PV panels
- Indoor Air Plus certification
- Rainwater collection and distribution systems
- Pre-plumb for greywater irrigation system
- HERS Certified with a rating of 25
- Smaller house design, with durable finishes inside and out



Owner: High Caliber Construction

Designer/Builder: High Caliber Construction

Energy Consultant: E3 Energy, Inc.

Elden Townhomes

Award Certification Level: Intermediate

Featuring:

- 6 Units, 1 unit available as affordable housing
- High density and city infill redevelopment
- Outdoor living space on roof with privacy screens
- BoraCare-non-chemical termite treatment
- Solar ready-easy connection to electrical panel
- Energy Star Certified and HERs rated
- Excess building materials donated to the public
- Cellulose and spray foam insulation with complete air sealing package for maximum energy efficiency



Builder: Hope Construction

Architect/Designer: Shapes & Forms Architects, Inc.

Engineer: Hubbard Merrell Engineering

Energy Consultant: E3 Energy, Inc.

Orion Energy Retrofit Project

Award Certification Level: Advanced Plus

Featuring:

- Retrofit project to improve energy efficiency, indoor environmental quality and durability
- High efficiency closed-cell spray foam insulation
- Pre and post-retrofit performance testing
- High efficiency hot water system (Energy Star)
- Rainwater harvesting system
- Recycled and low to no-toxic materials throughout
- Home Energy Rated (HERs) rated
- Heat Recovery Ventilator (HRV) for healthy indoor air quality



Owners: Christie Dennis & Sam Buchika
Architect/Designer: Architectural Design Studio
Builder: Ridge Top Construction

Coulter Pavilion

Award Certification Level: Intermediate

Featuring:

- Passive solar design implemented with south orientation and proper shading
- Additional Greenhouse/Workshop on property
- Access to outdoor living space that includes native/xeriscape
- Rainwater harvesting for irrigation and distribution with a 5,000 gal. storage tank
- Minimal impact to natural vegetation
- High efficiency spray foam insulation
- Cooling tower for ventilation of air exchange
- Low VOC and durable finishes throughout



Owners: Lewkowitz Family

Builder: Harmony Builders

Architect/Designer: Alexander Studio

Landscape: Agassiz Landscape Group -

Interior Design: Nancy Petrenka Interiors, LCC -

Lighting Design: Cappadonnas The Lighting Center

Mars Hill House

Award Certification Level: Advanced Plus

Featuring:

- Goal of net-zero energy home
- Innovative design with live dashboard system that provides ongoing energy, water and resource impact data on a website for community to access
- Integrated local materials (including cinder block with cinder infill) to minimize carbon footprint
- Passive solar, solar PV and solar thermal systems
- Rammed earth wall for additional thermal mass storage
- Water catchment systems including a 10,000 gallon cistern built into attached greenhouse for on-site food production
- Working towards Living Building Challenge Certification



Owner/Designer: Alan Francis & Birgit Buss
Builder: Stilley-Tullos Design Build Group

Habitat for Humanity of NAZ- Verde St.

Award Certification Level: Intermediate

Featuring:

- City infill project and efficient design for smaller house accommodation
- Use of recycled materials
- Air sealing on framing
- Spray foam insulation
- Energy Star appliances
- Low-Flow fixtures and toilets
- Xeriscape/native landscaping
- Low VOC and durable materials



Owners: Tim and Clover Jacobs

Architect/Designer: Karl Eberhard

Builder: Habitat for Humanity, North Pines, LLC; KCS; JKC, Inc.; Wespac, Eco Pro Insulation; & numerous community volunteers

Ballard Residence & Artist Studio

Award Certification Level: Advanced Plus

Featuring:

- Home and artist studio insulated and air sealed with spray foam insulation.
- Rain and snow harvesting for domestic use with a 22,500 gallon cistern with filtration system
- Low flow and energy efficient fixtures and appliances throughout-including space heating
- Sierra Pacific windows that are Sustainable Forestry Initiative (SFI) certified provide solar heat gain and thermal efficiency
- Artist studio is passive solar and has attached greenhouse
- Completely off-grid with solar P.V. providing 100% of electrical needs



Owners: Doug & Louisa Ballard

Builder: Green Mountain Construction

Architect/Designer: Architectural Design Studio

Lankford Residence – “The Mule Barn”

Award Certification Level: Advanced Plus

Featuring:

- “A simple home for simple minded people”
- Structurally Insulated Panels (SIPs) roof & wall construction with pre-cut windows and doors
- Off-grid: ground mount Solar PV (12-panels at 250 KW),
- Rain and snow harvesting for domestic use with a 7,500 gal. water cistern and filtration system
- Wildlife fencing to accommodate safe passage
- Passive solar design
- Efficient design for smaller house accommodation
- Durable low-maintenance and low-toxic materials



Owners: Jim & Taeko Lankford

Architect/Designer: Architectural Design Studio

Solar: Prometheus Solar

Cooperrider Residence

Award Certification Level: Intermediate

Featuring:

- Building exterior wrapped with rigid insulation to stop thermal bridging and maximize efficiency
- Permeable walkways and driveways with xeriscape Landscaping
- Passive solar design with attached greenhouse
- Masonry stove for efficient space heating from wood burning
- Heat Recovery Ventilator (HRV) for healthy indoor air
- Efficient electric on-demand hot water system
- Complete graywater irrigation system for landscape
- Solar Ready Home
- Rainwater harvesting system



Owners/Builder/Designer - Bryan & Beth Cooperrider
Design Support: SolarTerra Design, LLC

Sedona Fire Station No. 6

Award Certification Level: Advanced Plus

Featuring:

- Innovative design - connection to community and natural environment including connection to Friendship trail
- Construction site fenced for preservation of natural surroundings
- Local regional materials: block and concrete
- Efficient & formaldehyde-free insulated walls and ceilings
- Natural day lighting throughout including several solar tubes
- Low-flow faucets and shower heads
- Energy Star appliances and LED Lighting
- Roof architecture influenced by the landscape of rock formations
- Winner of the 2014 Governor's Award for Innovation and Energy from AZ Forward



Owner: *Sedona Fire District*

Builder: *Danson Construction Inc.*

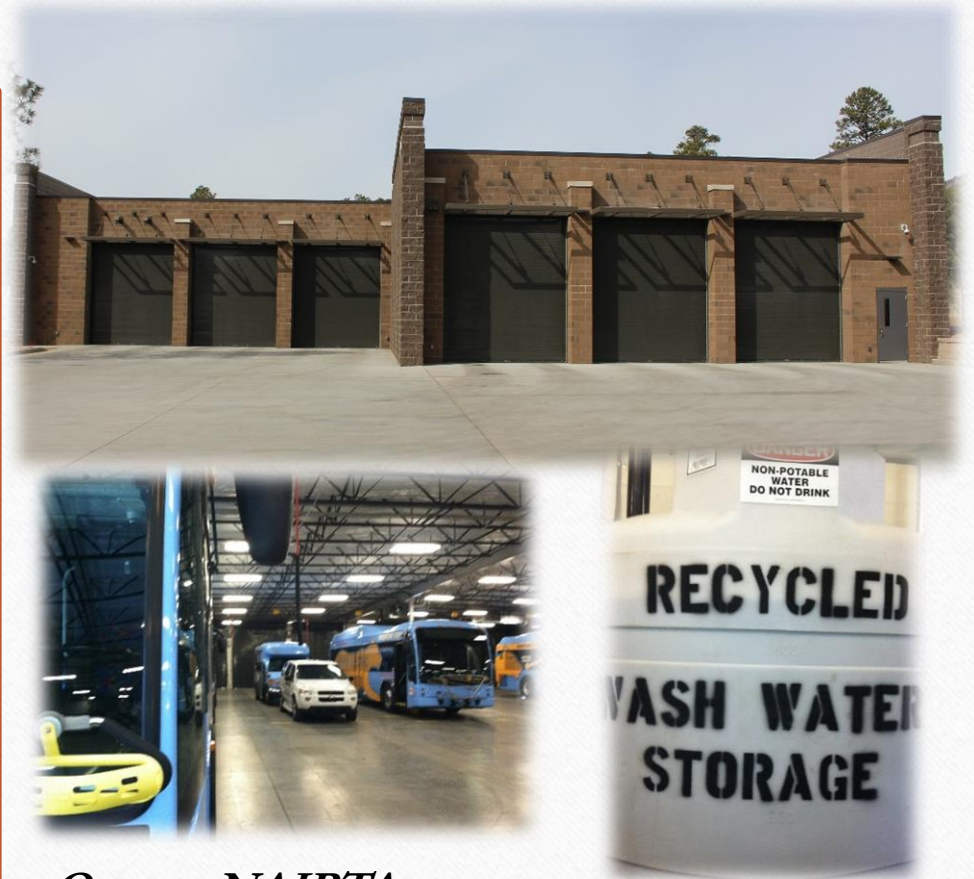
Architect/Designer: *LEA Architects, LLC*

NAIPTA Facility Expansion

Award Certification Level: Advanced Plus

Featuring:

- Durable and regional materials utilized throughout
- Low-flow plumbing fixtures and toilets
- Innovative bus wash facility that recycles 80% water for reuse in washing
- Low-impact development during construction
- Grant funded solar P.V. will be installed to supply electric needs
- Reclaimed water for irrigation of native plants/xeriscaping
- Energy Star appliances and LED Lighting
- Bike racks installed on site
- 95% of buses are hybrid



Owner: NAIPTA

Builder: Kinney Construction Service

Architect/Designer: DLR Group

CCSBP is thankful for the community's support and involvement!

Owner/builders
Contractors
Consultants
Educators
Affordable Housing Programs
Home-Owners
Engineers
Students
Utility Companies
Performance Testing Companies
Solar Companies



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Subcontractors
Building Science Professionals
Designers
Non-Profits
Government
Suppliers
Media
Construction Managers
Relators
Waste Management
Enterprises